

Title (en)
METHOD FOR PRODUCING SEAMLESS METAL PIPE

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES EIN NAHTLOSEN METALLROHRES

Title (fr)
PROCÉDÉ DE FABRICATION D'UN TUYAU MÉTALLIQUE SANS SOUDURE

Publication
EP 3120942 A1 20170125 (EN)

Application
EP 15764059 A 20150316

Priority
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Abstract (en)
A solid billet is piercing-rolled using a 4 roll-type inclined rolling mill including larger-diameter cone-type main rolls (1, 1') arranged horizontally or vertically to face each other across a pass line (X-X) and smaller-diameter auxiliary rolls (7, 7') arranged vertically or horizontally to face each other similarly across the pass line between the facing main rolls, while maintaining a feed angle (²) and cross angle (³) of the main rolls and a feed angle (^{2'}) and cross angle (^{3'}) of the auxiliary rolls to be within the ranges: 5° ≤ ² ≤ 25°; 3° ≤ ³ ≤ 35°; and 10° ≤ ² + ³, ^{2'} + ^{3'} ≤ 55°. Preferably, a diameter (d₀) of the solid billet and a diameter (d) and wall thickness (t) of the hollow piece after the piercing satisfy the relationship: 1.5 ≤ d₀ · E_r / E_s ≤ 4.5 (where E_r = ln(2t/d₀), and E_s = ln{2(d - t)/d₀}). With this configuration, it is possible to produce a thin-wall hollow piece at a high reduction rate from a billet made of a less formable material.

IPC 8 full level
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